

In the Claims:

Claims 1-27 (Canceled).

28. (Original) A semiconductor device, comprising:

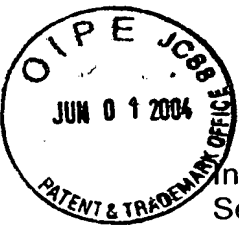
a semiconductor substrate having a drift region of first conductivity type therein and transition region of first conductivity type that extends between the drift region and a first surface of said semiconductor substrate and has a vertically
5 retrograded first conductivity type doping profile therein that peaks at a first depth relative to the first surface;

first and second shielding regions of second conductivity type that extend in the drift region and define respective P-N junctions with the transition region, said
10 first and second shielding regions extending laterally towards each other in a manner that constricts a neck of the transition region to a minimum width at a second depth relative to the first surface; and

an anode electrode that extends on the first surface of said semiconductor substrate and defines a Schottky rectifying junction with the transition region.

29. (Original) The device of Claim 28, wherein a product of the peak first conductivity type dopant concentration in the transition region and a width of the transition region at the first depth is in a range between about $1 \times 10^{12} \text{ cm}^{-2}$ and about $7 \times 10^{12} \text{ cm}^{-2}$.

30. (Original) The device of Claim 28, wherein a product of the peak first conductivity type dopant concentration in the transition region and a width of the transition region at the first depth is in a range between about $3.5 \times 10^{12} \text{ cm}^{-2}$ and about $6.5 \times 10^{12} \text{ cm}^{-2}$.



In re: B. Jayant Baliga
Serial No.: 10/671,333
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Page 2

In the Title:

Please amend the title of the application to read as follows: **"INTEGRATED
CIRCUIT POWER DEVICES HAVING JUNCTION BARRIER CONTROLLED
SCHOTTKY DIODES THEREIN"**